USGS
science for a changing world

Earthquake
Shaking

Green
Alert

GSN USAID FROM THE AMERICAN PEOPLE

ANSS

M 4.3, 14km W of San Clemente Is. (SE tip), CA

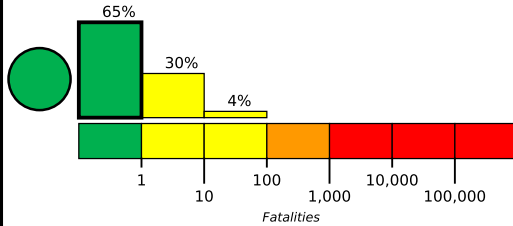Origin Time: 2019-06-05 10:47:18 UTC (Wed 03:47:18 local)
Location: 32.8112° N 118.4910° W Depth: 7.8 km
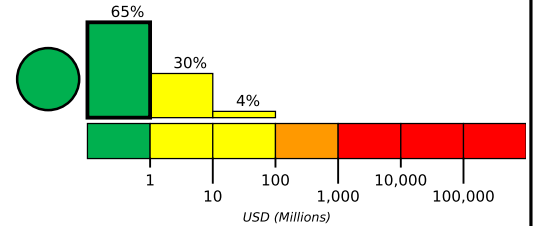**FOR TSUNAMI INFORMATION, SEE: tsunami.gov**

PAGER
Version 2

Created: 9 minutes, 47 seconds after earthquake

Estimated Fatalities

Green alert for shaking-related fatalities and economic losses. There is a low likelihood of casualties and damage.
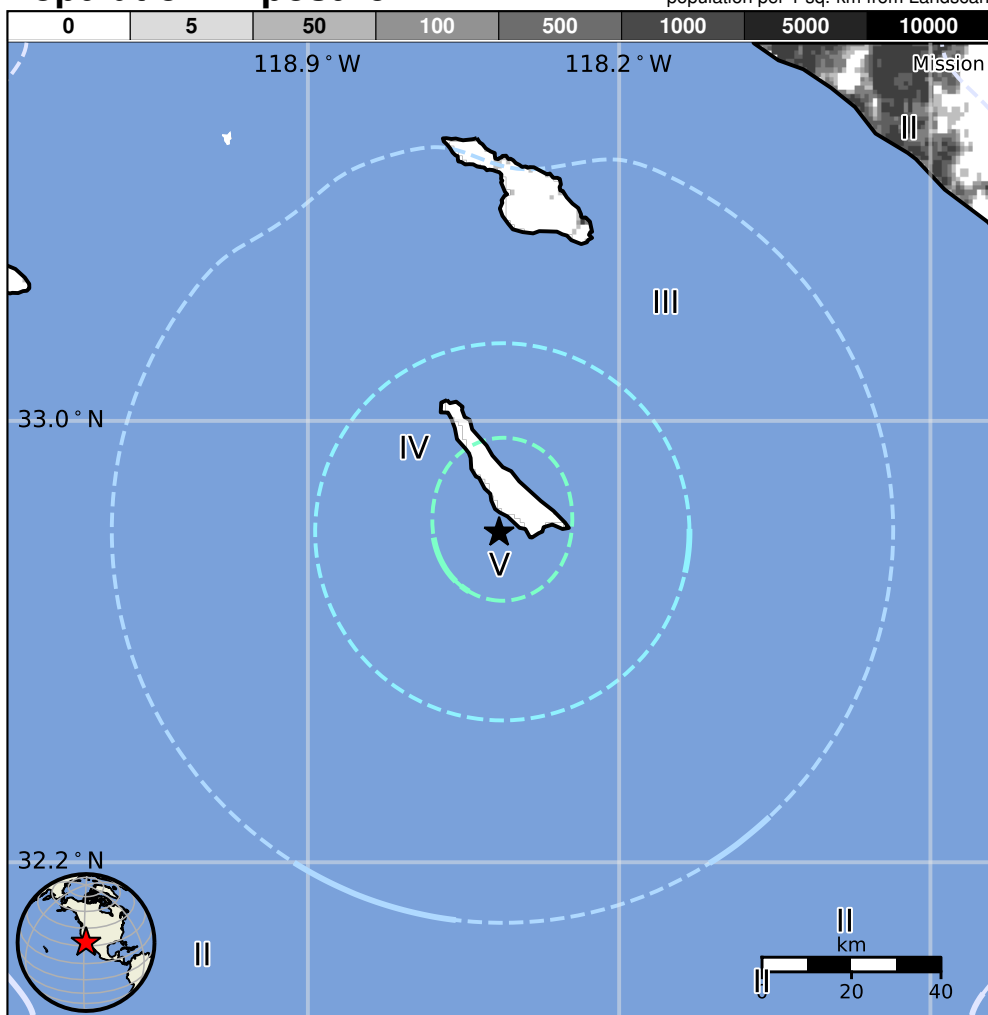
Estimated Economic Losses

Estimated Population Exposed to Earthquake Shaking

ESTIMATED POPULATION EXPOSURE (k=x1000)		331k*	869k	0	0	0	0	0	0	0
ESTIMATED MODIFIED MERCALLI INTENSITY		I	II-III	IV	V	VI	VII	VIII	IX	X+
PERCEIVED SHAKING		Not felt	Weak	Light	Moderate	Strong	Very Strong	Severe	Violent	Extreme
POTENTIAL DAMAGE	Resistant Structures	None	None	None	V. Light	Light	Moderate	Mod./Heavy	Heavy	V. Heavy
	Vulnerable Structures	None	None	None	Light	Moderate	Mod./Heavy	Heavy	V. Heavy	V. Heavy

*Estimated exposure only includes population within the map area.

Population Exposure

population per 1 sq. km from Landscan

Structures

Overall, the population in this region resides in structures that are a mix of vulnerable and earthquake resistant construction. The predominant vulnerable building types are mud wall and adobe block with concrete bond beam construction.

Historical Earthquakes

Date (UTC)	Dist. (km)	Mag.	Max MMI(#)	Shaking Deaths
1991-06-28	164	5.6	VI(1,267k)	1
2003-12-22	392	6.6	VI(8k)	2
1971-02-09	176	6.6	IX(21k)	65

Recent earthquakes in this area have caused secondary hazards such as landslides and liquefaction that might have contributed to losses.

Selected City Exposure

from GeoNames.org

MMI	City	Population
III	Avalon	4k
II	San Joaquin Hills	3k
II	Laguna Niguel	63k
II	San Juan Capistrano	35k
II	Aliso Viejo	48k
II	Dana Point	33k
II	Newport Beach	85k
II	San Clemente	64k
II	Oceanside	167k
II	**Mission Viejo**	**93k**
II	Carlsbad	105k

bold cities appear on map.   (k = x1000)

PAGER content is automatically generated, and only considers losses due to structural damage.
Limitations of input data, shaking estimates, and loss models may add uncertainty.
https://earthquake.usgs.gov/earthquakes/eventpage/ci38624056#pager

Event ID: ci38624056